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08654730 BA

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Doc Code: Artifact

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Artifact Type Code: S

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Other, description: _____

Doc Code: Artifact Artifact Type Code: Z

March 8, 2004



US005732523A

United States Patent [19]

Masters et al.

[11] Patent Number: **5,732,523**[45] Date of Patent: **Mar. 31, 1998**[54] **SYSTEM FOR SECURING COMPOSITE GRATINGS TO STRUCTURAL MEMBERS**[75] Inventors: **Rodney H. Masters**, Houston; **Michael T. Haas**, Humble, both of Tex.[73] Assignee: **Advanced Industrial & Marine Services**, Houston, Tex.[21] Appl. No.: **654,730**[22] Filed: **May 29, 1996**[51] Int. Cl.⁶ **E04B 1/38; E04C 2/42**[52] U.S. Cl. **52/698; 52/460; 52/507; 52/584.1; 52/656.8; 52/664; 52/712; 52/764; 52/775; 52/777**[58] Field of Search **52/507, 664, 581, 52/584.1, 460, 656.8, 656.3, 764, 712, 761, 775, 777, 698; 403/364; 292/256**[56] **References Cited****U.S. PATENT DOCUMENTS**

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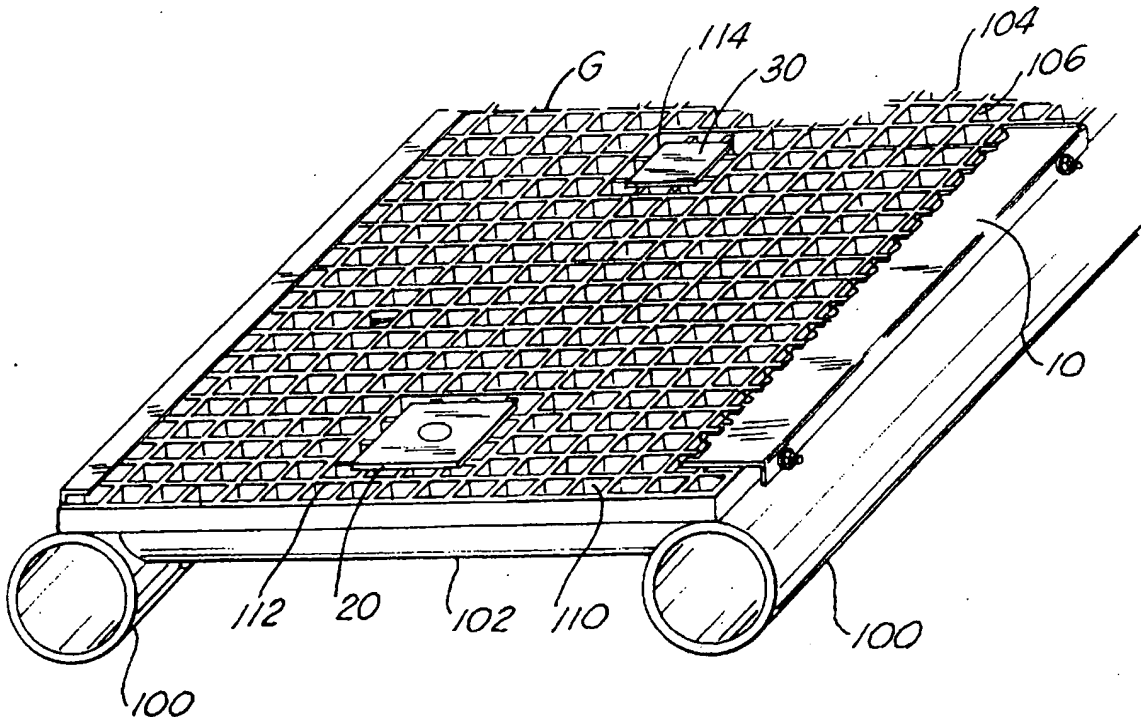
Hand written pages describing prior art in the field of installing grating to upper structures.

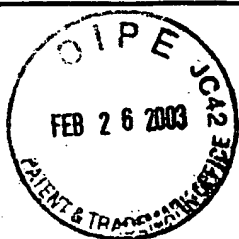
Primary Examiner—Christopher Kent*Attorney, Agent, or Firm*—Pravel, Hewitt, Kimball & Krieger

[57]

ABSTRACT

A fastener system for securing a grating to an underlying structural support member when the grating experiences extremely high wave pressures. The fastening system includes elongated generally L-shaped connectors for fastening the longitudinal edges of grating sheets to structural members and plate fasteners in a wave zone area of the platform. The plate fasteners have a top plate for mounting on an upper surface of the grating sheets, a bottom plate for attaching to the structural members in a laterally extending direction for supporting the grating sheet and bolt assemblies for clamping the top and bottom plates together in order to secure the grating sheets to the structural members. A combination of the elongated L-shaped connectors and the plate fasteners provide fastening support for the gratings sheets so as to resist vertical and horizontal wave pressures when secured to the supporting members.

17 Claims, 4 Drawing Sheets



The United States of America



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The Commissioner of
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Has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.

Therefore, this

United States Patent

Grants to the person(s) having title to this patent the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States of America or importing the invention into the United States of America for the term set forth below, subject to the payment of maintenance fees as provided by law.

If this application was filed prior to June 8, 1995, the term of this patent is the longer of seventeen years from the date of grant of this patent or twenty years from the earliest effective U.S. filing date of the application, subject to any statutory extension.

If this application was filed on or after June 8, 1995, the term of this patent is twenty years from the U.S. filing date, subject to any statutory extension. If the application contains a specific reference to an earlier filed application or applications under 35 U.S.C. 120, 121 or 365(c), the term of the patent is twenty years from the date on which the earliest application was filed, subject to any statutory extension.

Bence Lehman

Commissioner of Patents and Trademarks

Pamela Morton

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